

REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter that Applicants regard as the invention.

Claims 1 and 14 are amended.

Claims 1–12 and 14 are rejected under 35 U.S.C. 101 for being directed to non-statutory subject matter. Claim 1, from which claims 2–12 depend, and claim 14 have been amended as indicated above to explicitly clarify that the second simulation executing step yields a second simulation result. The Examiner contends that “executing a simulation of the second step does not produce a result that is stored or conveyed to the user” and therefore the subject claims are not patentable subject matter. Applicants respectfully disagree for at least the following reasons. Contrary to the Examiner’s contentions, the Federal Circuit in *Eolas Technologies Inc. v. Microsoft Corp.* held that software alone constitutes patentable subject matter.

The next section in Title 35, section 101, explains that an invention includes “any new and useful process, machine, manufacture or composition of matter.” 35 U.S.C. §101 (2000). *Without question, software code alone qualifies as an invention eligible for patenting under these categories, at least as processes.* See *In re Alappat*, 33 F.3d 1526 (Fed.Cir.1994); *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352 (Fed.Cir.1999); MPEP §2106.IV.B.1.a. (8th ed., rev. 2 2001) (*quoting Eolas Technologies Inc. v. Microsoft Corp.*, 399 F.2d 1325, 1338 (Fed.Cir.2005)) (emphasis added).

Moreover, the claims clearly recite statutory subject matter pursuant to the legal standard set forth in *AT&T v. Excel Communications*, 172 F.3d 1352 (Fed.Cir.1999). In this case, the Court held that the claims corresponding to an invention is statutory if the claimed invention produces a *useful, concrete, tangible result*. See *Id.* at 1358. More specifically, claim 1 provides for a mounting process simulation program that is recorded on a computer-readable

medium that causes a computer to execute the simulation of a mounting process which involves a plurality of steps. The steps, as they are performed in the claimed manner constitute or describe a manner in which a simulation of the mounting process is performed, which is clearly a useful, concrete and tangible result. Claim 14 recites similar language. In addition, claim 6 which depends from claim 1 describes in part "...displaying three-dimensionally an animation to indicate a result simulated in the second simulation executing step on a display device..." Thus, claims 1–12 and 14 constitute statutory subject matter, and withdrawal of the rejection is respectfully requested.

Claims 1–14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sarvar et al. – *Effective Modeling of the Reflow Soldering Process: Basis, Construction, and Operation of a Process Model*. Applicants respectfully disagree for at least the following reasons. Regarding claims 1 and 14 and claims 2–12 which depend from claim 1, Sarvar et al. does not teach executing a simulation based on a first condition selected for a first step; selecting a simulated result from the first simulation executing step as a simulation condition for a second step; and executing a simulation of the second step based on a second condition, wherein the second condition contains at least the simulation condition. By contrast, Sarvar et al. only simulates a peak temperature based on varying specific heat capacities that are empirically obtained (p. 132) but does not select a simulated result from the first simulation executing step as a simulation condition for a second step, as recited in the rejected claims. Further, Sarvar et al. fails to execute a simulation of the second step based on a second condition, wherein the second condition contains at least the simulation condition in order to yield a second simulation result, as claimed herein.

Regarding claim 13, Sarvar et al. does not teach a condition table forming portion that forms a condition table that lists a simulation condition of a second step positioned subsequently

to a first step, whereby the condition table is formed by using a simulation result simulated based on a first condition selected for at least a first step. The Examiner contends that on page 131, paragraphs 1–3 under *Modeling Variable Materials Data*, Sarvar et al. discloses each and every element of claim 13. Again, Applicants respectfully disagree. Unlike claim 13, Sarvar et al. relates to empirically obtaining varying specific heat capacity values (first condition) and then simulating peak temperatures based on such empirical values (simulation of peak temperature based on a first condition). In particular, paragraphs 1–3 on page 131 in Sarvar et al. discuss how two different experiments were carried out: first, the effect of a constant value for a specific heat capacity that can vary...for a single FR4 substrate and between different substrates... (see Fig. 6); and second, the variable behavior of specific heat capacity with respect to increasing temperatures (see Fig. 7). Nowhere on page 131, paragraphs 1–3, or anywhere else in Sarvar et al., is it disclosed that a condition table is formed by using a simulation result and that the condition table lists a simulation condition of a second step, as recited in claim 13. The language that follows this feature in claim 13 is also absent from Sarvar et al.: *a simulation result outputting portion that executes the simulation of the second step based on the condition table and a condition input from the inputting portion and outputs a result to the outputting portion.*

Essentially, Sarvar et al. involves performing multiple simulations of peak temperatures with each one based on a different specific heat capacity value; however each of these simulations are apparently independent of each other. By contrast and as stated in the subject claims, a second simulation is executed based on some information from the first simulation as discussed above with respect to claims 1 and 14 (e.g., claim 1: *...selecting a simulated result from the first simulation executing step as a simulation condition...and executing a simulation of the second step based on a second condition containing at least the simulation condition...).* Therefore, there is a dependency relationship between the first simulation executing step (first

simulation result) and a second simulation executing step (second simulation result). This is also demonstrated in claim 13, in which the condition table is formed by using a simulation result that was simulated based on a first condition selected for at least a first step, and the simulation of a second step is executed based on the condition table and a condition input from the inputting portion.

Hence, Sarvar et al. fails to disclose each and every element of claims 1–14 and thus, does not anticipate the subject claims. Therefore, the rejection should be withdrawn.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 36409.

Respectfully submitted,
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